MATH COLLOQUIUM

Regular idempotents in βG

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Time : 14:00
Place : TB 250, Boğaziçi Üniversitesi

Abstract: Every idempotent ultrafilter p on a group G determines a Hausdorff left translation invariant maximal topology on G in which p converges to the identity. We say that p is regular if this topology is regular and p is uniform. We show that for every infinite group G, there exists a regular idempotent ultrafilter on G. As a consequence we obtain that for every infinite cardinal k, there exists a homogeneous regular maximal space of dispersion character k, which is the answer to an old difficult question. Another consequence tells us that the topology of the real line can be refined to a translation invariant regular maximal topology of dispersion character continuum.

Tea and coffee will be served at 15:00